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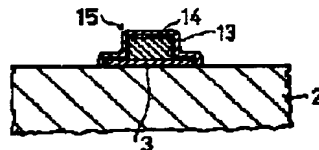
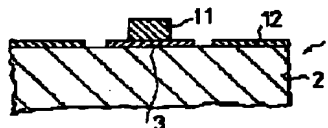
(54) **HIGH FREQUENCY BUMP FORMATION**

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(57) Abstract:

PURPOSE: To absorb the warpage of a substrate and prevent cratering by forming a prism or cylinder cushion bump which is smaller than the area of an electrode pad, forming an adhering thin film so as to wrap the whole planes of the pad and the cushion bump and forming a conducting thin film on the adhering thin film.

CONSTITUTION: On the electrode pad 3 of a semiconductor element 2 on a wafer 1, a positive or negative prism or cylinder cushion pump 11 which is smaller than the area of an electrode pad 3 is formed using photosensitive resist or photosensitive polyimide. Then, a 1000 \AA -3000 \AA Ti thin film or 100 \AA -3000 \AA Pd thin film 13 is formed for adhesion so as to wrap the whole planes of the pad 3 and the cushion bump 11. A 100 \AA -10 μm Cu thin conducting film or 1000 \AA -10 μm Au thin conducting film 14 is formed on the thin film and a high frequency bump 15 is completed. Thus, the cushion pump 11 absorbs warpage due to thermal expansion, etc., when the pad 3 is connected with the substrate and cratering on the pad 3 is prevented.



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